

ABSTRACT

Methods to predict the rheological properties of composition comprising a filler in a matrix are described. The present invention further involves determining the difference between the work of cohesion and the work of adhesion for a filler and a matrix in order to quantitatively predict the rheological properties of the system, such as yield point. The ability to predict such properties has numerous advantages. The present invention further relates to a rheological master curve and a method to produce the curve which permits one to predict a rheological property of a composition comprising a filler in a matrix based on the particular polymer used and the particular filler used. Also disclosed is a method of choosing a filler to achieve a desired rheological property using the rheological master curve described herein.